

Advancing Alberta

New website up and running that shows the university's influence across the province

University sport loses a pioneer

Ed Zemrau used sport to shine light on the U of A, Edmonton

Staff Spotlight

Physics technician right at home living on the leading edge of lab technology

University sustains greenest employer status

Michael Brown

The University of Alberta is becoming a sustainability dynasty when it comes to recognition for going green.

“Winning the Greenest Employer is another key indicator of how seriously we are taking sustainability initiatives at the University of Alberta.”

Trina Innes

For the fourth time in as many years, the U of A has been named one of Canada's Greenest Employers by judges of the annual competition. The designation recognizes employers that lead the nation in creating a culture of environmental awareness, who have developed exceptional Earth-friendly initiatives, and who are attracting people to their organizations because of their environmental leadership.

“Winning the Greenest Employer is another key indicator of how seriously we are taking sustainability initiatives at the University of Alberta,” said Trina Innes, director of the U of A's Office of Sustainability. “We want to be a model of success for higher education in academics, operations and outreach.”

Some of the projects highlighted in the decision include the establishment of the Office of Sustainability to oversee and create awareness about the university's many environmental initiatives. Judges of the greenest employers also pointed out that the university's recycling program, established in 1975, now includes an in-house recycling transfer centre to compact recyclables, and even a “green demolition” program to encourage salvage and re-use of building materials as part of on-campus renovations and demolitions.

Ensuring that the U of A remains a sustainability leader, the Office of Sustainability is collaborating to roll out a number of new campus

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On your marks, get set . . . go!



A sea of students flooded the infield of the Butterdome to write a final exam April 25.

Convocation to celebrate leading minds and innovators

Derek Roy-Brenneis

The University of Alberta will honour 11 inspiring individuals with honorary degrees this May and June.

“A University of Alberta honorary degree recognizes exemplary achievements and outstanding service to society. Each of these recipients possesses a unique and remarkable combination of passion and leadership,” said U of A Chancellor Linda Hughes.

The following 11 recipients of the university's highest honour will deliver addresses during convocation ceremonies in Edmonton June 5 to 13 and at a special ceremony in Beijing on May 26.

Donald Bruce Dingwell is an experimental volcanologist who probes the behaviour of molten rocks and their impact on volcanic systems and volcanic hazard assessment. Chair in mineralogy and petrology at the Ludwig Maximilian University of Munich, Dingwell was recently elected secretary general of the European Research Council. A U of A alumnus and global academic citizen, Dingwell is an elected member of the Royal Society of Canada. *Honorary Doctor of Science degree – June 6 at 10 a.m.*

Julio J. Frenk is an authority on global health and a highly influential figure at the crossroads of scholarship and practice. Currently the dean of the Harvard School of Public Health, Frenk was one of the lead co-authors of Education of Health Professionals for the 21st Century, commissioned and published by *The Lancet* in 2010. He has served as minister of health for Mexico, executive director at the World Health Organization and senior fellow at the Bill and Melinda Gates Foundation. *Honorary Doctor of Science degree – June 8 at 10 a.m.*

A former vice-president of the Canadian Space Agency, **Garry Lindberg** played an integral role as project manager for the Canadarm, or Space Shuttle Attached Remote Manipulator System, which was named one of the top 25 engineering wonders of Canadian science. Lindberg also oversaw the creation of the Canadian Astronaut Program and played a key role in establishing the Canadian Space Agency in 1989. Lindberg is a U of A distinguished alumnus and a fellow of the Canadian Academy of Engineering, and a recipient of the Eadie Medal of the Royal Society of Canada.

Honorary Doctor of Science degree – June 7 at 10 a.m.

The Right Honourable Paul Martin was the 21st prime minister of Canada from 2003 to 2006 and minister of finance from 1993 to 2002. As prime minister he signed agreements with the provinces and territories to establish a national early learning and child-care program and sought a historic consensus between Canada's Aboriginal and non-Aboriginal peoples in the Kelowna Accord. As minister of finance, he erased Canada's deficit, introduced the largest tax cuts in Canadian history and increased federal support for education and research and development. *Honorary Doctor of Laws degree – June 11 at 3 p.m.*

James Jude Orbinski, former president of Médecins Sans Frontières/Doctors Without Borders, is renowned as a physician, writer and advocate for social justice. He spent several years in the field with Médecins Sans Frontières in Somalia, Afghanistan, Rwanda and Zaire, and accepted the Nobel Peace Prize on behalf of the organization in 1999. An officer of the Order of Canada and chair and professor in

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folio

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UNIVERSITY OF ALBERTA

The University of Alberta maintains a database of all alumni. This database is used to send you news about the U of A, including folio and New Trail, invitations to special events and requests for support. On Sept. 1, 1999, post-secondary institutions were required to comply with the Freedom of Information and Protection of Privacy legislation of the province of Alberta. In accordance with this legislation, please respond to one of the following options:

Please keep my name, or
 Remove my name from the folio list

Name _____

Signature _____

No response means the University of Alberta assumes an individual wishes to remain on the mailing list.

Pinpointing how the U of A advances Alberta

Michael Brown

When the University of Alberta was created by an act of parliament in 1906, it was with the intent that creating the province's first university would advance all Albertans.

More than a century later, the U of A's influence can be felt in the furthest reaches of the province and at every point in between. To mark the ways that the university touches Alberta, a website entitled Advancing Alberta has been created that showcases the ways in which the university is, as its founder Henry Marshall Tory would say, "uplifting the whole people."

"The U of A has a powerful story to tell in terms of the role it plays and has played in building the province—one that consists of a host of smaller stories illustrating how the university and its people touch communities across Alberta," said Indira Samarasekera, president of the U of A. "Through this new website, online visitors can see and read just how diverse and far-reaching U of A's activities are and get a better sense of the benefits they gain from supporting our work."

Using a Google Map, the site offers a virtual pincushion atlas of the U of A's many research projects, partnerships, initiatives, programs and fast facts about enrolment and alumni from the four corners of Alberta.

"There are many ways that we go about trying to get information out to people throughout the province, but when you think in terms of how the University of Alberta—their University of Alberta—is affecting their lives and their community, we thought, 'Why not let them find out, using today's technologies, in a way that makes sense for them?'" said Debra Pozega Osburn, vice-president (university relations). "It

is our responsibility to let people know how we are affecting people's lives in a positive way."

One of the hundreds of activities plotted on the map is the Sanctuary: Spiritual Heritage Documentation Project out of the Faculty of Arts that is preserving through photography the sacral material of all rural prairie Ukrainian churches, which are increasingly at risk as congregations age and migrate to the big cities. The project has already documented nearly 60 churches around Alberta.

"All architectural landmarks change and it's important to record them while they exist," said John-Paul Himka, history and classics researcher, who is heading up the project with fellow history and classics researcher Frances Swyripa, and Natalie Kononenko, researcher in the Department of Modern Languages and Cultural Studies. "This is Alberta history—it's meaningful for the community, for rural towns and to the Ukrainian population, which is unique as it represents the only post-Byzantine colonization outside of Europe."

The U of A's positive impact might be felt most widely through DiscoverE, a U of A student initiative from the Faculty of Engineering that delivered 758 workshops to 17,877 Alberta elementary and junior high students in 2011. Almost 2,300 youth attended DiscoverE summer programming.

Mohamed El Daly, director of DiscoverE, explains the camps exist as a way to introduce science, engineering and technology to youth and children in a fun way that shows them that working in these fields is a possibility.

"Getting children and youth to pursue these careers, specifically those in communities that are under-represented in sciences and engineering, such as women, Aboriginal people or people with limited abilities, gives them better job opportunities and, accordingly, it will reflect better on our



economy in the future,"

said El Daly.

"It is part of giving back to the community and showing that there are possibilities for everyone, and that education is not limited to a selected few."

In the longer term, Pozega Osburn says she is hoping the site will be expanded to include the U of A's impact nationally and globally, but for now, a critical part of the university's mission and mandate is right here in Alberta. "This is potentially the start of something really fantastic."

Visit the Advancing Alberta website at www.advancingalberta.ualberta.ca.

To have your project or program added to the map, send inquiries to darlene.bryant@ualberta.ca.

Recognizing exemplary achievements and outstanding service to society

Continued from page 1

global health at the University of Toronto, Orbinski is also co-founder of Dignitas International, a medical humanitarian organization dedicated to providing community-based care and improving the international response to HIV/AIDS and related illnesses in the developing world. *Honorary Doctor of Laws degree – June 12 at 3 p.m.*

Host of *Natch'l Blues* on CKUA Radio and *Saturday Night Blues* on CBC Radio One and Two, **Holger Petersen** is an award-winning broadcaster and co-founder/owner of the independent roots and blues music label Stony Plain Records. The label has earned 11 Juno Awards and six Grammy nominations. A founder and past artistic director of the Edmonton Folk Music Festival, Petersen was named a member of the Order of Canada in 2003 for his contributions to Canadian culture. *Honorary*

Doctor of Letters degree – June 13 at 10 a.m.

Chantal Petitclerc is the only Canadian athlete to have won gold medals at the Olympics, Paralympics and Commonwealth Games. She has taken home 21 Paralympic medals, 14 of them gold, and holds five world records for wheelchair racing. An ambassador for the international Right to Play organization, Petitclerc was Canadian athlete of the year and Canada's female athlete of the year in 2008. In 2009 she was named a companion of the Order of Canada. *Honorary Doctor of Laws degree – June 12 at 10 a.m.*

Mary May Simon's career has been devoted to advancing sustainable and equitable development in the circumpolar region. She was a key figure in the evolution of the Inuit Tapiriit Kanatami, Canada's national Inuit organization, and has

served as its president since 2006. Simon was Canada's first ambassador of Circumpolar Affairs and also president and special envoy of the Inuit Circumpolar Conference. A former producer and announcer for the CBC Northern Service, Simon is also the founding chairperson of the Arctic Children and Youth Foundation, a charitable organization that advances standards of living, educational opportunities and health and well-being. *Honorary Doctor of Laws degree – June 12 at 3 p.m.*

President and founder of the Edmonton-based retailer the Running Room, **John Stanton** is an entrepreneur whose organization has inspired people across North America to pursue physical fitness and active lifestyles. What began in 1984 in an 80-square-foot space is now a 110-store, 1,300-employee leading retail operation recognized

three times in the past five years as one of Canada's 50 Best Managed Companies. Author of eight books on running and walking, Stanton has been honoured by the Order of Canada. *Honorary Doctor of Laws degree – June 6 at 3 p.m.*

U of A Professor Emerita

Shirley Stinson is recognized as a visionary leader in the development of nursing scholarship. Stinson was the first female and the first nurse to receive the federal designation of Senior National Health Research Scientist. An inspiring mentor to generations of nurses, Stinson was at the forefront of interdisciplinary course design and education delivery that has improved standards of patient care around the world. She was the chair of the first International Nursing Research Conference, former president of the Canadian Nursing Association and inaugural chair of the Alberta Foundation for Nursing Research. *Honorary Doctor of Science degree – June 7 at 3 p.m.*

Professor Fan Zeng is a well-known Chinese painter, calligrapher and poet. Dean of the Chinese Painting Institute of Peking University, PhD supervisor of both the College of Literature and the College of History at Nankai University, and the Chinese National Academy of Arts, Zeng was honoured as a UNESCO Special Consultant of Diversified Culture in 2009. Many of his works may be found in the National Library of China and the Great Hall of the People in Beijing. *Honorary Doctor of Letters degree – May 26 at a special ceremony in Beijing.*



(Clockwise from top left) Garry Lindberg, Mary May Simon, Paul Martin, John Stanton, Chantal Petitclerc, Fan Zeng, Donald Dingwell, Holger Petersen, Julio Frenk, Shirley Stinson and James Orbinski will receive honorary degrees during the U of A's spring convocation.

Domino-sized genetic tester in hunt for TEC Edmonton nano award

Bryan Alary

You wouldn't know it from appearances, but a metal cube the size of a toaster, created at the University of Alberta, is capable of performing the same genetic tests as most fully equipped modern laboratories—and in a fraction of the time.

At its core is a small plastic chip developed with nanotechnology that holds the key to determining whether a patient is resistant to cancer drugs or has diseases like malaria. The chip can also pinpoint infectious diseases in a herd of cattle.

Dubbed "The Domino," the technology has the potential to revolutionize point-of-care medicine. The innovation has also earned Aquila Diagnostic Systems, the Edmonton-based nano startup that licensed the technology, a shot at \$175,000 as a finalist for the TEC NanoVenturePrize award.

"We're basically replacing millions of dollars of equipment that would be in a conventional, consolidated lab with something that costs pennies to produce and is field portable so you can take it where needed. That's where this technology shines," said Jason Acker, an associate professor of laboratory medicine and pathology at the U of A and chief technology officer with Aquila.

The Domino employs polymerase chain reaction technology used to amplify and detect targeted sequences of DNA, but in a miniaturized form that fits on a plastic chip the size of two postage stamps. The chip contains 20 gel posts—each the size of a pinhead—capable of identifying sequences of DNA with a single drop of blood.

Each post performs its own genetic test, meaning you can not only find out whether you have malaria, but also determine the type of malaria and whether your DNA makes you resistant to certain anti-malarial drugs. It takes less than an hour to process one chip, making it possible to screen large populations in a short time.

"With most cancers you want to treat the patient with the most effective therapeutic as possible," she said. "That's what this does: it really enables personalized medicine. It will be able to test every patient at the right time, right in their doctor's office. That's currently not feasible because it's too expensive."

Employing green practices

Continued from page 1

initiatives, which include adhering strictly to green procurement principles and implementing a greening-the-workplace program known as ecoREPs. This program invites campus citizens to take a leadership role in implementing green projects across their work unit.

In an effort to reinforce campus engagement, the university is the first post-secondary institution to partner with the new One Simple Act on Campus initiative that encourages employees, faculty and students to commit to doing one of 20 possible actions related to waste reduction, energy efficiency, sustainable living or water management.

The U of A also recently earned a silver rating for its sustainability efforts from the Sustainability Tracking, Assessment & Rating System, or STARS, a new system that rates post-secondary institutions in Canada and the United States.

STARS is a self-reporting framework for colleges and universities to measure their sustainability performance. Participating institutions assess their sustainable practices in the areas of education and research; operations; planning, administration and engagement; and innovation. The U of A's score places it second among the 14 Canadian institutions that have received recognition from STARS, just behind the University of British Columbia. More than 150 post-secondary institutions across North America have taken part in the STARS program, which ranks participants with a Reporter, Bronze, Silver, Gold or Platinum rating.

"This is more evidence that others appreciate our efforts," said Innes. "We hope this recognition will attract new employees and students who are interested in growing the culture of sustainability on campus." ■



David Alton (left) and Jason Acker are part of the nano startup vying for the TEC NanoVenturePrize award.

"That's the real value proposition—being able to do multiple tests at the same time," Acker said, adding that the Domino has been used in several recently published studies, showing similar accuracy to centralized labs.

The Domino was developed by a team led by Linda Pilarski, an experimental oncologist with the Faculty of Medicine & Dentistry and a former Tier 1 Canada Research Chair in biomedical nanotechnology.

In 2008, her team received \$5 million over five years from Alberta Innovates Health Solutions to perfect and commercialize the technology. As an oncologist, Pilarski is interested in its pharmacogenomic testing capabilities, such as determining whether breast cancer patients are genetically disposed to resist certain drugs.

"With most cancers you want to treat the patient with the most effective therapeutic as possible," she said. "That's what this does: it really enables personalized medicine. It will be able to test every patient at the right time, right in their doctor's office. That's currently not feasible because it's too expensive."

Along with its versatility, two key selling points are affordability and portability, with each portable box expected to cost about \$5,000 and each chip a few dollars, says Aquila president David Alton. It's also designed to be easy to use and rugged—important features

for the livestock industry, the company's first target market. The Domino will be put through trials within a year at one of the country's largest feedlots in southern Alberta.

Alton credits Aquila's relationship with the U of A, not



The Domino technology uses a plastic chip that can perform 20 genetic tests from a single drop of blood. John Ulan

just for the research but for the business relationship with TEC Edmonton that has helped the company license and patent Domino. TEC Edmonton is a joint venture between the U of A and Edmonton Economic Development Corporation with resources and expertise to help startups in the early stages of operations.

"We see a huge potential market for the technology and we're looking at applying the technology developed here at the U of A to markets first in Alberta and then globally, to address important health issues here and throughout the world." ■

Are You a Winner?

Congratulations to Farzana Gohar, whose name was drawn as part of Folio's April 13 "Are You a Winner?" contest, who correctly identified the location of last week's photo as the corner of 87 Avenue and 114 Street, just southeast of the Butterdome, and future construction site of the Physical Activity and Wellness Centre. Gohar has won a copy of "Baba's Kitchen Medicines: Folk Remedies of Ukrainian Settlers in Western Canada" by Michael Mucz. Up for grabs this week is a copy of "Pursuing China: Memoir of a Beaver Liaison Officer" by Brian Evans. To win, simply identify where the object pictured is located and email your answer to folio@ualberta.ca by noon on Monday, May 7, and you will be entered into the draw.



Michael Brown

Highlights of the U of A's greenest employers recognition

The Office of Sustainability also manages a "Green Grant" program in support of projects that lead towards greater sustainability on the campus. Supported projects include bicycle clinics, paper reduction campaigns and social media contests.

An ongoing naturalization project on campus focuses on reclaiming unused and non-native vegetation areas, and reintroducing native plant species that require less maintenance and water, and contribute to increased biodiversity on the campus one plant at a time.

The U of A has adopted sustainable cleaning practices, including the use of environmentally friendly cleaning chemicals that meet "Green Seal" and "Environmental Choice" standards.

From an energy management plan first established in the 1970s, the university has recently developed its "Next Generation Energy Management Program" that includes numerous initiatives to be implemented over the next seven years, with anticipated carbon dioxide emissions reduced by an estimated 30,000 tonnes upon

completion (and savings of approximately \$3.8 million every year).

A multi-year, \$25-million energy management program includes upgraded energy-efficient lighting, with completed projects saving over \$1.7 million in utility costs and reducing associated carbon dioxide emissions by 20,000 tonnes per year.

The U of A recently implemented a policy to ensure that all major renovations and all new provincially funded campus buildings must be built to at least a Leadership in Energy and Environmental Design (LEED) Silver certification standard. The university recently achieved the prestigious LEED Gold certification for its Triffo Hall building renovation. Five other campus facilities are pursuing LEED Silver certifications.

The university maintains a car-sharing program (managed by Connect by Hertz) on its north campus to provide short-trip transportation options and encourage employees to leave their cars at home. All cars are fuel-efficient or hybrid models. ■

U Hall takes good advice to heart the open door

Carl Amrhein
Provost and Vice-President (Academic)

During her annual State of the University Address in March, President Samarasekera challenged all of us to tackle the question of how we can continue to advance our learning, discovery and citizenship missions in uncertain economic times. Her only caveat was this: "The answer can no longer be that we have to work harder. We have to work differently. How can we organize our work differently and spend our funds effectively?"

We subsequently launched a website to submit ideas for our initiative to reinvigorate, rethink and reimagine the university. The site closes April 30, so I want to thank everyone who took the time to share his or her thoughts on the different ways that the university might make the most of its resources of time and money.

While being asked to take a hard look at the way we do things and find fundamental, sustainable solutions to the challenges we face is a significant undertaking to be sure, I am struck by the honesty, thoughtfulness and ingenuity contained in many of the nearly 350 suggestions received thus far.

I am inspired by the heartfelt comments found in the suggestions and the passion that so many of you have expressed for your university.

As noted in an earlier post on our university blog, *Colloquy*, there are some themes that have emerged. In no particular order, the following areas have garnered the most suggestions:

- technology to reduce paper (e.g., electronic time sheets, committee materials, syllabi)
- flex-time options for staff
- pay freezes and pay cuts, mostly for senior administrators, with suggestions for scaled cuts based on salary, and pay caps for full professors since mandatory retirement is gone
- teaching-focused options for professors
- online teaching elements, including online courses and online lectures
- shared and/or centralized positions
- optimization of existing technology (e.g., broader use of PeopleSoft modules, more and better staff training, streamlined financial processes)
- fix the FEC process: Does it need to be annual? Is it required for a single increment?
- RSO process streamlining, especially setting up research accounts
- switch from defined benefit to defined contribution plan
- opt-out options on health benefits, especially when spouses both work here

We will share suggestions with the community soon, in a way that

protects the identity of those who submitted them with the expectation of confidentiality. Some steps will be taken immediately and other options will be longer-range; we expect to have a report and some go-forward plans by this fall.

Any suggestions that fall under the purview of NASA or AASUA collective agreements that warrant closer examination will follow along the appropriate process. NASA and AASUA are the sole and exclusive representatives of their respective groups in these discussions and the two presidents sit on the umbrella committee. Comments that deal with elements covered by either agreement, once discussed by the umbrella committee, likely will go directly to discussions with the relevant employee group.

I hope to share any immediate steps prior to the onset of my administrative leave July 1. We already have been asked to extend the umbrella committee process. I will discuss this with the committee when next we meet, and with Martin Ferguson-Pell, who will be acting provost in my absence.

So again, thank you to everyone who took the time to submit a suggestion. On behalf of the umbrella committee and the working committees, I appreciate your creativity, candour and passion. ■

Rural medicine program a winner

Quinn Phillips

Five years ago, the Faculty of Medicine & Dentistry sent seven nervous medical students out to rural communities for their third year of medical education.

They were the first to take part in the Rural Integrated Community Clerkship, a program set up partly to encourage medical students to take up rural practice to help fill the void in those communities. The students go through the core rotations in a rural setting.

"They were pioneers, having taken the risk of being in the program," says Jill Konkin, associate dean of community engagement in the faculty.

The U of A's medical program is the first to implement a rural integrated community clerkship in communities with populations of less than 10,000. The first students headed to four communities in September 2007. Now there are 20 students in nine communities in northern Alberta.

Just five short years later, the program is proving its worth. In Sylvan Lake there is a new practising physician, Jordan Larue, who was one of the first seven to give the program a try. In addition, the community hosts a resident who also went through the clerkship program.

University 101

"We've got people who have been through the program mentoring each other at all levels, which is quite exciting," said Konkin. "From a faculty point of view, now that we have people at varying stages it's easier for the rest of the profession to understand what this program is about, as well as to find new ways of supporting students. When we started out, we had expectations and hopes that this is exactly what would happen."

Brad Bahler, a practising physician in Sylvan Lake, says he feels very lucky to have been asked to take students for this program since its first year. "We get a chance to work with the students for a longer time and they get to know us and get more comfortable in the working environment and teaching environment."

Bahler has Larue working with him now. Larue was placed in Hinton for the clerkship but then matched in Sylvan Lake for his residency. The proverbial shoe fit, so he stayed.

"I think I'm pretty fortunate because I'm not sure I would've made that choice, not having had much time doing rural medicine," said Larue. "It took me probably six months to make that decision, so I wouldn't have had that opportunity otherwise." ■

Remembering Edwin Zemrau, 1933-2012

Athletics pioneer used sport to connect people

Matt Gutsch

The University of Alberta as well as local, national and international athletics communities are mourning the death of Edwin (Ed) Zemrau, a selfless champion of Canadian amateur and university sport, and the first Golden Bears and Pandas director of athletics. He was 78.

"Ed was a leader for Athletics in the faculty, but it went far beyond that," said Ian Reade, who is in his second stint as director of Athletics at the U of A. "I think it is safe to say he was a dominant international sport personality to an extent far beyond what most people would recognize."

"Ed's influence was very often low profile—connecting people and creating relationships that resulted in major accomplishments for which he probably deserved credit, but never sought it."

Born and raised in Edmonton, Zemrau graduated from Victoria Composite High School and attended Lethbridge Collegiate, where he played hockey in the Western Junior Hockey League before earning a scholarship to the U.S. college hockey power University of Denver. He was a 1957-58 NCAA All-American, and captained that Pioneers squad to their first ever NCAA championship. He later played minor pro hockey with the Winnipeg Warriors in the old Western Hockey League.

Zemrau began his distinguished career at the U of A in 1960 as an assistant to Maury Van Vliet, dean of physical education and Canadian sporting icon in his

own right. Zemrau served three years in that role and then became the inaugural director of athletics in 1963, a post he would hold until 1981.

Zemrau began to get national notice when he served as chair of the Canadian University Centennial Project in 1967, earning the Canadian Centennial Medal of Honour for Service to the Nation for his efforts.

He was vice-chair for the 1970 World Amateur Wrestling Championships, which were held in Edmonton. He also served as the chair of the Western Intercollegiate Football League, which is now Canada West, for a four-year term beginning in 1968.

In 1972 he continued his involvement internationally by serving as the chef de mission for Canada at the World Winter Universiade in Lake Placid, New York. He also worked with Van Vliet as a member of the bid committee that helped bring the Commonwealth Games to Edmonton in 1978. Just prior to the start of those games, Zemrau became president of the Canadian Interuniversity Athletic Union, the present-day Canadian Interuniversity Sport, a post he held from 1977 to 1984.

Following the enormous success of the Commonwealth Games, Edmonton was hungry for more international sport, and Zemrau delivered. Leaving his post as director of Athletics in 1981, Zemrau was named president and CEO of the World University Games (1981-1985) and was the driving force of the 1983 Summer Universiade held in Edmonton. Zemrau returned to the U of A in 1985 as a professor in the Faculty of Physical Education and Recreation.

He served as a senior administrator with FISU for 20 years beginning in 1983, while sitting on the board of directors for the World Track and Field Championships (1999-2001), which were held in Edmonton in 2001.

Zemrau was inducted into the Alberta Sports Hall of Fame as a builder in 1976, named Edmonton Sportsman of the Year in 1984 and was added to the U of A Sports Wall of Fame in 1995. ■

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Edwin Zemrau

— HENRY MARSHALL TORY, FOUNDING PRESIDENT, 1908

"uplifting the whole people"

Researcher finds bloom stays on the rose by keeping its praises quiet

Jamie Hanlon

Sarah Moore says that if you want your memorable family resort vacation to stay memorable, move away from the keyboard. Seriously.

Moore researches how word-of-mouth stories affect our feelings about our experiences, and she has found that our feelings change when we share them. She says that when the storyteller analyzes or thinks about an emotional experience like a family vacation, it reduces the emotions, positive or negative, about the event. However, she notes that for practical experiences, such as buying and using a USB stick, analyzing and thinking more about the experience will amplify our feelings about it, be they positive or negative.

Moore, an assistant professor with the Alberta School of Business, says this is one important area of consumer research that remains virtually unexplored.

"Nobody had ever asked, 'What happens to me if I tell you that the restaurant I went to last night was fantastic?' We know that this makes you, the recipient of word of mouth, more likely to go to the restaurant, but what does it do to my feelings about the restaurant, as the storyteller? It's an important question because it's going to determine, for example, whether I go back to the restaurant and whether I'm likely to ever

tell anyone else the story," said Moore. "It can affect both the consumer's actual behaviour and future word of mouth."

She says that when we have an emotional experience, such as travelling or watching a movie, we develop feelings about those experiences. When telling stories about these experiences later, we can describe them and express our appreciation or dislike for them—but once we start to analyze them, the lustre of that emotion fades.

“There’s a saying that you should never ask anyone why they love you. This is true—don’t do it. You shouldn’t be rationalizing or analyzing that feeling because the more you do, the more it fades.”

Sarah Moore

Moore says it is similar to work that clinical psychologists have done to help people overcome traumatic experiences by analyzing and processing them. Thus, thinking about a negative experience may mean giving that restaurant with bad service a second try. But

for positive experiences, the best thing is not to think too much.

"There's a saying that you should never ask anyone why they love you. This is true—don't do it. You shouldn't be rationalizing or analyzing that feeling because the more you do, the more it fades," she said. "If you have a positive emotion that you'd like to preserve, don't think about 'why.' Just relive it."

On the other hand, Moore says, analyzing utilitarian experiences only reinforces our feelings and beliefs about those experiences. The difference is that these experiences are related to things that have a specific purpose; they tend to be more cognitive than emotional. For example, using tax software, driving a commuter vehicle or taking an airplane ride will each elicit positive or negative feelings. And the more we think about what we did or didn't like about these practical experiences, the more certain we will feel about whether to use the product or service again.

"For cognitive experiences, if we think about those, if we analyze and rationalize them, it actually amplifies our feelings," she said. "We're figuring things out. We're becoming more certain and more extreme in our opinions."

Moore says that companies seeking to manage consumer storytelling can help consumers generate word of mouth that will be helpful to the business and to the consumer. She notes that some reviewer websites, such



Sarah Moore

as Epinions.com, provide consumers with guidelines on what to include in a review. She says that helping customer-service staff learn to elicit functional feedback from customers—or generate explanations of what they didn't like—works in the best interests of company and customer alike.

"I think this is one of those instances where marketers' and consumers' ultimate goals are aligned," said Moore. "Both want to preserve happy experiences. Both want to get over negative experiences. So at least their incentives are going in the same direction in this case." ■

Researcher finds phoning health helplines a call worth making

Bryan Alary

Triage telephone lines staffed by nurses are a convenient way for patients to get expert health-care advice they trust—with an added bonus of avoiding a trip to the emergency room.

According to research from the University of Alberta, seven out of eight patients who use Alberta's HEALTHLink 24/7 triage line follow the advice they receive.

"Much of my research in self-care is centred around education and increasing awareness so health-care professionals can incorporate self-care into their practice," said lead author Bev Williams, an associate professor in the Faculty of Nursing. "It's an important, innovative tool for health care in Alberta, especially now with the pressures facing the system."

The study, which appears in the April issue of the *Journal of Clinical Nursing*, saw Williams' team interview 312 HEALTHLink callers to find out whether they followed advice given by teletriage nurses.

The vast majority of participants were women, at 92 per cent. About two-thirds of callers sought advice on behalf of someone else, with children the top response at 94 per cent. These types of

inquiries most often focused on colds, flu, diarrhea, vomiting, infections, pregnancy and post-pregnancy.

Without teletriage, Williams said, callers would be left with little recourse but visiting an emergency department, potentially a very long proposition given the non-emergent nature of many calls. And for all too many Albertans without a family doctor, that route isn't an option, she said.

"The emergency department would probably be where most of these moms and children would end up. Certainly, in terms of the health-care system, emergency care or a family physician's office is far more costly than a telephone triage system would be."

In 73 per cent of cases, the telehealth nurse advised some form of self-care. The remaining 27 per cent also received self-care recommendations but were advised to



Bev Williams

follow up with a health-care professional if the problem persisted.

Whether patients opted to take nursing advice depended greatly on how satisfied they were with the interaction. Satisfied callers were four times more likely to engage in self-care, results Williams said were

influenced by things like the nurse's clarity and demeanour along with the ease of the advice itself.

Other factors influencing self-care decisions included how strongly the nurse emphasized the importance of following the advice and whether the caller agreed with that advice.

"This demonstrates the importance of having well-trained nurses who are patient and responsive with callers," Williams said.

The researchers found that 98 to 99 per cent of all callers said they'd likely use HEALTHLink again.

Williams is now concentrating on a followup study to engage non-urgent emergency room patients and find out whether they're aware of HEALTHLink and potential self-care options. That work is expected to wrap up by the end of the year.

"It's possible these patients could be waiting in the ER when a

phone call to HEALTHLink may have helped them deal with their issue. Raising awareness would prevent unnecessary visits to the ER."

“It’s an important, innovative tool for health care in Alberta, especially now with the pressures facing the system.”

Bev Williams

Williams' first study was funded by the Social Sciences and Humanities Council of Canada. The work is another example of the U of A enhancing the health of Albertans and Canadians through leadership in health-care research and innovation. ■

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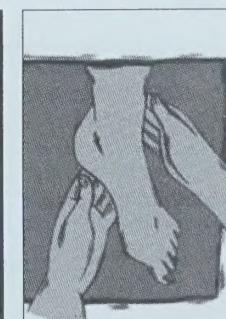
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Last one out turn off the photons

Brian Murphy

To better understand his research into the future use of photons as a way of transferring information and storing data, a University of Alberta professor says a basic understanding of how electronic materials work can help.

Zubin Jacob, an electrical and computer engineering researcher, says that just as an on/off switch controls electrons in the flow of electricity, his research team is looking for a switch to control the individual particles of light called photons.

Electricity is transferred through conventional materials, but Jacob says photons will transfer through metamaterials, which are man-made media that are engineered on a nanoscopic scale.



Research on how new materials control particles of light could lead to everything from faster computers to more powerful microscopes.

"We've been trying to understand how new materials can control photons," said Jacob. "Electronics has revolutionized our everyday lives but the need for faster computing and secure communications requires us to move to optical circuitry in the future."

Jacob is the co-lead author of the international research study that was able to show abrupt changes in the properties of metamaterials used to control photons.

Researchers say that metamaterials will one day be used in applications as varied as information networks, imaging and solar cells. Jacob says we are five to 10 years away from the commercial application of such metamaterials based on the control of light-matter interaction.

"One area of science that metamaterials can change on a shorter term is microscope technology," said Jacob. "The ability of metamaterials to compress the size of light will enhance the power of microscopes to nanoscopes that are able to reveal nanofeatures to the human eye." ■

Tracking interstellar breezes on the moon, Mars

Suzette Chan

The Canadian Space Agency has funded a University of Alberta-led project to study the effects of solar winds on Earth's moon and on Mars. The results are anticipated to influence design of spacecraft for robotic and human exploration.

"We have limited data regarding the environments in which equipment and astronauts must function and how these environments respond to solar activity," said Clare Watt, a research associate with the Department of Physics. "There is small room for error in these high-cost missions, especially when there are lives at stake."

The Cluster for Lunar and Planetary Sciences project is a multiple-university undertaking led by Department of Physics professor Robert Rankin. The lion's share of the three-year, \$450,000 award is split evenly between the U of A and the University of Waterloo, with a smaller portion going to the University of Toronto. The University of Calgary will serve in an advisory capacity.

"Researchers will combine state-of-the-art simulation models of our solar system in order to study the solar wind and its interaction with rocky planetary surfaces such as our moon and Mars," said Watt. She adds that the cluster project also allows for collaboration between scientists who study the atmosphere around planetary bodies and scientists who study the surfaces.

Watt leads part of the project that looks specifically at the effect of solar winds on the moon. For example, solar winds intensify the static electric charge of dust storms on the moon. "You don't want to land in one," she said. "Lunar dust is not like the dust we have here on Earth. It's very fine and difficult to shield against. It's electrically charged, so

it's attracted to the metal [on landing craft and the electronics in them] and could create short circuits."

Another U of A group, led by professor Ian Mann, will concentrate on Martian aurorae. Discovered in 2005, aurora activity on Mars is little understood. Watt said, "Martian aurorae can provide key information about how the solar wind interacts with the Martian surface, and will provide valuable insight into how the atmosphere and surface have been eroded through thousands of years of solar wind weathering."



This is the first photograph of Earth taken from the moon in 1969. (Photo courtesy NASA)

Besides the possible technological applications, the cluster project will allow students to hone computer modelling skills using recent exploratory data from NASA and the European Space Agency.

"There are a lot of new skills involved," says Watt. "They will have to be creative to envision the environments on the moon and on Mars." ■



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Cosmic-ray mystery deepens at South Pole

Brian Murphy

A University of Alberta physicist has taken part in groundbreaking research into the origins of cosmic rays that may require a rethinking of current theories on the astrophysical phenomenon.

U of A particle physicist Darren Grant was part of an international research team that buried optical sensors deep under the South Pole in hopes of identifying an incredibly high-energy particle that originates in deep space and can pass through everything in its path—including the Antarctic ice sheet.

"We set the sensors in the ice to identify high-energy particles called neutrinos," said Grant. The researchers were testing a theory that neutrinos are associated with gamma-ray bursts, a powerful astrophysical phenomenon originating in deep space that has the potential to shower Earth with high-energy particles.

"We tested 300 gamma-ray bursts, which should have sent some neutrinos our way, but surprisingly we found none," said Grant. "This result contradicts 15 years of predictions and challenges one of the leading theories for the origins of the highest-energy cosmic rays."

The researchers say that either gamma-ray bursts are not responsible for the highest-energy cosmic rays, or the efficiency of neutrino production in the burst is much lower than has been predicted.

Grant says gamma-ray bursts happen about once a day with an explosion of light that can be seen halfway across the known universe. "If all the sun's energy for 10 billion years were suddenly released in a 10-second blast, you would duplicate the power of a single gamma-ray burst."

The Antarctic project, aptly named IceCube, is an international collaboration of 250 scientists from 10 countries including Canada. Grant was part of a team that buried more than 5,000 optical sensors under the ice, within a few hundred metres of the geographic South Pole.

"We drilled into the ice using a jet stream of near-boiling water and went down 2,500 metres," said Grant. "The sensors were strung along cables lowered into the holes. We created a grid of sensor lines covering a square kilometre of the ice sheet."

The researchers say that not finding neutrinos is a breakthrough because it lets them rule out a leading theory and helps them refine their search for answers.

"We have now added one important piece to the puzzle that, at least for the moment, has deepened the mystery," said Grant. "This research program is a particle physicist's playground."

Grant and his U of A students were co-authors of a paper on the IceCube research that was published April 19 in the journal *Nature*. ■



Researchers searching for neutrino hits from outer space put more than 5,000 optical sensors under the South Pole.

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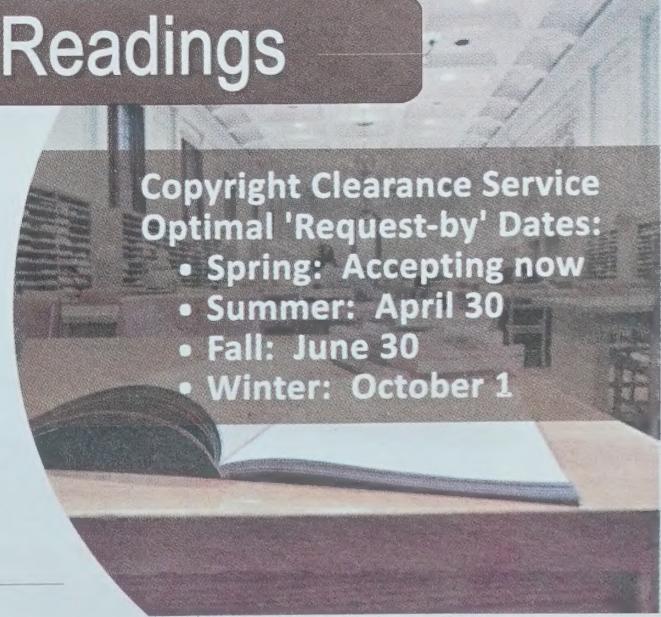
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Technician finds a home living on the edge of technology



Greg Popowich in the ultra-low-temperature lab.

Suzette Chan & Michael Brown

Now that he has spent more than a decade in one place, it's probably safe to say that rolling stone research technician Greg Popowich has found a home in the Department of Physics.

"I've always been the type of person that if I don't like what I'm doing I try something else," said Popowich, who was recently named Sigma Xi Scientific Research Society's 2012 Nat Rutter Technician of the Year award winner. "It speaks for itself that I've been here for 13 years."

He adds, "I've really been treated well here. The professors are really down to earth and have always been supportive and a real pleasure to work with. When I get up in the morning, it's not 'oh no, I have to go to work,' it's 'what are

we doing today and what's the next piece of equipment coming, what do we have to build?'

Popowich works with equipment for condensed matter physics experiments: ultrafast lasers, electron microscopes, thin-film deposition equipment, ultra-high vacuum technology and low-temperature refrigeration units. He says his job is to support the professors' research in any way they ask.

"Somebody always comes in with some sort of different idea and we make it a reality," he said.

"We will design, build and modify any equipment that comes in. Even stuff that's purchased from other companies doesn't always do what we want it to do. We're always looking for something different to do with that equipment. We'll take stuff apart, we'll modify, whatever it takes to get it to do what they want it to do."

Popowich is currently finishing up work on the much-anticipated, ultra-low-temperature dilution refrigeration system, which will produce temperatures approaching absolute zero.

Though Popowich's job is as complicated as any you'll find at the U of A, his career has not always been in high tech. In fact, he began his working life in the depths of B.C. coal mines.

Growing up in Fernie, B.C., the mechanically inclined Popowich was rebuilding the two-stroke engines of his motorcycles by the time he was 13. Years later, he was driving and servicing 200-tonne trucks as a coal miner. "After four and a half years in the mines, I thought, 'Okay, time to go back to school!'

In 1993, Popowich went to the DeVry Institute for a degree in electronics. He landed a job with a semiconductor equipment firm in San

Jose, California. The work involved a lot of travel—including a memorable three-week stint in China—but after three years, Popowich says, his family decided to settle down. "We wanted to come back to Canada."

He got a job at the U of A spinoff company Micralyne, where he met one of its regular clients, physics professor Mark Freeman. In 1999, Freeman and two other Department of Physics faculty members, Frank Hegmann and Ray Egerton, pooled research funds and were able to hire Popowich full-time.

Along the way, Popowich says he had the honour of working with Don Mullin, a physics technician at the U of A since 1971.

"There was a wealth of knowledge that I was really able to tap into. Don has been my mentor since I've been here, and pushed me to always do everything to the best of my abilities."

Popowich lives by this creed, whether it's creating the unimaginable, living up to the department's reputation for having "screaming clean systems," or training students on using the equipment.

"I love working with the students, these brilliant people from all over the world," said Popowich. "The people and ideas make the university a pretty exciting place to be. As the technology changes, so does your job, and you're right at the front of it."

How to make your own ultra-low-temperature dilution refrigerator

Popowich is finishing up work on what he feels could be the most complicated and challenging project of his career: the ultra-low-temperature dilution refrigeration system for John Davis.

"This was really outside of my expertise. Electronics, soldering, machining, I've done," said Popowich. "But it is a whole different world getting as close as possible to absolute zero. There is so much more to consider."

The core of the system is a helium dilution refrigeration unit that was donated to Davis. "We're refurbishing it," Popowich said. "I'm going to have to totally rewire it and replace all of the helium capillaries. The old-style vacuum connections have already been updated to modern fittings."

Popowich also designed the support structure, which was required to be as free as possible from the effects of ambient building vibrations. The pillars are actually hollow aluminum columns filled with sand; each one is capped with a disc of specially chosen high-density plastic. The disc sits on the sand, but away from the insides of the pillar. On top of the discs, Popowich placed airbags on which the legs of the optical table sit.

He arrived at this elegant solution after years of observation and experience. "I adapted an auto-level system that I designed based on existing isolation tables."

Popowich has built a second support structure for the lab. It will hold a new dilution fridge, which is being built by Oxford Instruments in England.

Kaplan winner stitched together career revealing the fabric of history

Geoff McMaster

There was a time in Europe when making a fashion statement could get you in a world of trouble. Particularly if you were a woman of low social rank, wearing loud, flamboyant clothing in the early 18th century was considered a subversive gesture as it bucked rigid social boundaries, and the response would often be violent.

"Women seen wearing printed cotton clothing in London, Bristol, Norwich, Dublin and other cities were beaten and their clothes torn off, or acid was thrown at them," says U of A fashion and textile historian Beverly Lemire. "The fact that many women continued in their choice of clothing is a rather startling revelation about the significance of fashion choices in this period."

The incendiary politics of fashion and the role of cotton in bringing about the industrial revolution between 1600 and 1800 are just two of the topics Lemire

explores in her wide-ranging, interdisciplinary research.

According to a pre-eminent historian of economic development in the early modern period, Jan de Vries of UC Berkeley, Lemire is "arguably the most innovative historian of her generation working in the field of textile and fashion history."

Lemire now adds the U of A's J Gordin Kaplan Award for Excellence in Research to her list of impressive accolades. Her research career, described as "meteoric" by arts dean Lesley Cormack, began with the 1991 publication of

Fashion's Favourite: The Cotton Trade and the Consumer in Britain. The book was groundbreaking on a number of counts, not the least of which was the way it used a single commodity to reveal sweeping social, political and economic change.

"I think my work has been really instructive in showing the ways fashion figured as a political as well as an economic phenomenon," says Lemire. "You get the sense of the agency of ordinary women and men in their interactions with [cotton], both for personal purposes of decoration, but in ways that defy the existing political systems." Her latest book, *Cotton*, was published last year in the Berg Publishers series, *Textiles That Changed the World*.

Recruited from the University of New Brunswick, Lemire joined

"I think my work has been really instructive in showing the ways fashion figured as a political as well as an economic phenomenon."

Beverly Lemire

the U of A in 2004 to take up the Henry Marshall Tory Chair, one of the arts faculty's most prestigious positions, in the departments of History and Classics and Human Ecology.

"The chair offered opportunities to collaborate with people in the clothing collection in Human Ecology," she says. "But I also thought there would be more scope for the sort of research, a lot of it collaborative, that is interdisciplinary... so it's been terrific here."

In recent years, Lemire has widened her focus to include the global textile trade in the 17th and 18th centuries and the links between Britain, Europe, India and the Atlantic world. One hallmark of her approach is the synthesis of a big-picture view—theorizing on the relationship between textiles, fashion and "the great transformations of human history"—with a ground-level, painstaking examination of primary documents.

"By studying archival records of petty thefts and small loans, Dr. Lemire has been able to expose a complex network of transactions among working-class women and connect these to the shift from mercantilism to capitalism," says Cormack.

Lemire was also able to uncover a huge network of largely hidden textile workers who manufactured ready-made clothing in England, clothing whole armies, navies and slave populations. Not much documentation existed, she says, because the work was considered "banal" (i.e., done by women) and was often conducted in private homes.

"But when you tease out those pathways you find there are actually people who made fortunes as contractors and subcontractors in these sorts of commodities," she says.

Also winning a 2012 Kaplan award is theoretical physicist Don Page, who lists among his accomplishments calculating the colour of a black hole and how fast it evaporates, finding new solutions to Einstein's equations, co-discovering the famous Hawking-Page phase transition and leading the refutation of three major claims by famous physicist Stephen Hawking.

The importance of Page's work is reflected in the more than 6,000 citations of papers he has written in the field's top journals.



Beverly Lemire

Poetry month has researcher waxing poetic on the importance of verse

Michael Davies-Venn

English poet John Donne, while recovering from illness in 1624, declared in *Devotions Upon Emergent Occasions*, "No man is an island." Almost 400 years later, that statement remains a maxim for the interconnected modern world.

It is also a reminder of the power and importance of poetry, says Jonathan Hart, professor of English and film studies. Hart says activities held each April for National Poetry Month help to re-establish the relevance of poetry.

"Sometimes we lose sight of what poets do, so what people try to do now is recapture the importance of poetry," said Hart. "A poetry month is important to remind us about the balance between different forms of knowledge and creativity."

Hart says poets and mathematicians, two centres of language playing equally important roles in helping build balanced societies, both



Jonathan Hart

illuminate the core queries he says cultures must answer: what is good, what is true and what is beautiful.

"Mathematics pushes us to use powerful tools in engineering and medicine, in order for us to describe a natural world and the universe," Hart said. "Great poets, who push back the frontiers of knowledge whether they write in prose or

poetry, talk about central myths that are very important to a culture for its past, present and future. The core of poetry and metaphor is what's at the heart of language, and mathematics is at the heart of practical science. And just like mathematicians, poets try to find what's fresh and new on the frontier of language."

But Hart says it is only recently that societies began making clear distinctions between mathematics and poetry. For example, William Gladstone, British prime minister in the late 19th century, had double honours in mathematics and classics. Erasmus Darwin, grandfather of Charles Darwin, wrote in verse and in prose.

"There was this classical tradition, but we have now started to make the error of saying that training is education," said Hart. "There is a gap between what we create in technology and how we cope with it, and coping comes out of culture and all of the resources we've had over thousands of years."

The U of A is helping to fill that gap by fostering interdisciplinary research, creating opportunities for students and researchers, and engaging with communities. Hart says the university is helping to strengthen the historic link that has helped develop balanced societies for centuries.

"The U of A's role in this country through drama, poetry, painting and design is very important and has been historically," he said. For example, Nobel laureate Derek Walcott's teaching at the U of A leaves a lasting impact, says Hart.

"Students can tell their grandchildren or neighbours that they were in a class with Derek Walcott. That should give someone shivers. What a challenge. He's a remarkable person who's at the highest level. It's a terrific honour and privilege," he said. "Consider the confidence he'd bring to a student, if he says, 'that's a good line' to someone who has come from around the world to study."

“The U of A's role in this country through drama, poetry, painting and design is very important and has been historically.”

Jonathan Hart

Hart will be part of the U of A's tradition of maintaining that balance when he lectures and reads at one of Germany's premier cultural institutions in May. He has been invited to the Goethe Museum to discuss the poetics and temporality of Shakespeare's sonnets and read his own sonnets. Locally, Hart's poem, *The Rain*, was selected for Edmonton's Poetry Route program that puts poetry in transit vehicles and LRT stations. ■

Professor's piano recital bridges cultures

Michael Davies-Venn

Two of China's most distinguished cultural institutions recently hosted a University of Alberta music professor to share his expertise on one of the most famous and influential composers.

The Department of Music's Jacques Després travelled to China and gave recitals April 27 at Beijing's Forbidden City Concert Hall and April 29 at Wuhan's Qintai Concert Hall. He also lectured on widely regarded French composer Claude-Achille Debussy.

"I feel very fortunate because there are not a lot of people who could be invited to recite at these halls," said Després. "It's a privilege to play at the Wuhan concert hall because some of the world's famous musicians have played there. It's one China's main concert halls."

“Invitations like these are important for the university because it shows that outside organizations are betting on me. It's a great responsibility in that sense because if they believe in me, it means they believe in the university.”

Jacques Després

"I've been working very hard on bringing Debussy into my repertoire, and they want me to play his works."

Debussy was born in 19th-century France to parents who were removed from the classical music tradition. His father was a store owner, his mother a seamstress. Despite his modest background, however, Després says Debussy was an extraordinary pianist and composer with a global outlook.

Imprints of Debussy's worldview began appearing in his works after an event that brought much of the world to Paris in 1889. Després says some 34 million people, including musicians, went to Paris for the Exposition Universelle.

"There were people from everywhere and these cultures brought with them art as well as music. It really inspired Debussy to use some of these sources and incorporate them to make his music varied and appealing. His influence has been tremendous," Després says.

A century and a half later, Després brings the world through Debussy's works to China, where he says the classical music tradition is growing. This is not the first time he's doing so. He honoured an earlier invitation to teach a master class at Beijing's Central Conservatory and give a recital of Debussy's *Préludes* at the Beijing Concert Hall. This time, he also lectured on Debussy. He says the appetite for his work in China is recognition of the U of A's standing.

"Invitations like these are important for the university because it shows that outside organizations are betting on me. They think I'm worth their investment and that the audience will like my performance. It's a great responsibility in that sense because if they believe in me, it means they believe in the university," Després said.

Després is one of several U of A scholars who have been well received in China, as the university continues building bridges of co-operation that foster, enhance and develop research with academic partners worldwide.

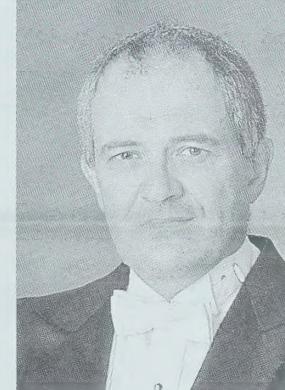
The university's China Institute is one of several vehicles being used to strengthen connections with the global community, as the university delivers on its responsibilities as a global steward. Gordon Houlden, the institute's director, notes the importance of cultural connections such as the one being developed by Després.

"The China Institute was created in response to the cultural interest in China of Sandy and Cécile Mactaggart, who are avid collectors of Chinese arts and textiles, which are now at the university," Houlden says. "Cultural linkages are essential to a balanced appreciation of Chinese civilization and Canada should, along with exporting its resources and industrial products to China, bring its artists, arts and culture to the Chinese people."

"So the contribution Jacques would make in this regard is valuable because this university puts great importance on its international responsibilities, and often that can be best expressed through culture, including music. Culture can pass seamlessly through the barrier of language."

As Després played Debussy's 12 *Études*, along with works by Beethoven and Liszt, he was bridging distinct cultures through music. He says his performance, part of which was streamed live on the Internet, is a reflection of the calibre of scholars at the university.

"Whether it's teaching or performing, if they love it, it reflects very well on the university. And it shows that at this university we have people who are of a certain worldwide level," Després says. "At this university, we're not only at the cutting edge of research, we're also able to bring what made Western art so important in the performing tradition." ■



Jacques Després

Tarwinder Rai

“Visiting over 60 elementary and high schools this past semester, U of A engineering students have been getting kids across the Edmonton area excited about mining engineering. And the lesson wouldn't be complete if it didn't include chocolate chip cookies and milk—or diamonds and rock soil, as mining professor Tim Joseph likes to call it.”

"You can look at the surface, but you don't know what is there until you break it," explained Joseph during a visit to Delwood Elementary School, where students in grades 4 and 5 learned the concept of separation in mines. The students break the cookie into pieces and drop it into a cup of milk. They then notice that, as the cookie settles at the bottom, the chocolate chips float to the top—voila, ore separation. "It's a great way to interact with the students and introduce them to engineering at an early age."

The mining outreach program is run by about 40 mining students and is sponsored by the Edmonton branch of the Canadian Institute of Mining. The engineering students themselves created the presentation and the cookie mining concept.



“Mining engineering students Marren Phinney and Giovanni Saccomani introduced a class of Grade 4 and 5 students at Delwood Elementary School to the mining industry.”

"The kids are very open to learning about mining and what it has to offer," says Marren Phinney, a fourth-year mining student. "What's interesting is that the diversity of mining can offer something that sparks interest in almost every kid. Usually the 'big machines' or the 'explosions' get the most attention."

Giovanni Saccomani, a second-year co-op mining engineering student, echoes these sentiments. "It's important to increase awareness of the mining industry in society today, especially here in Alberta. Alberta is one of the focal points in the world for mining," he says, noting that a lot of the young students are already excited about mining.

"It's surprising how knowledgeable kids are about geology, tectonics and other mining-related issues. Involving kids is a fun way to open their eyes about engineering and educate them at the same time," says Phinney.

Each of the schools visited by the U of A students will also be invited to attend the M4S Mining for Society Expo on May 3 and 4 at Churchill Square. Real-life mining equipment will be on display and demonstrations of the mining process will take place. ■

news [shorts]

folio presents a sample of some of the stories that recently appeared on the ualberta.ca news page. To read more, go to www.news.ualberta.ca.

Seeking autism clues in siblings

Lonnie Zwaigenbaum, researcher with the Department of Pediatrics, is working with scientists from across North America to find out whether there are genetic markers for autism as a way of giving families with autism in an older child a more accurate estimate of what a younger sibling's risk is.

"If there were a way of using genetic biomarkers to identify infants at high risk before the more overt manifestations of autism were obvious, it would really open the door to provide support and intervention at earlier stages of development," said Zwaigenbaum, lead researcher of the two-year study.

The research initiative is funded by the Simons Foundation and by Autism Speaks. The \$1.3 million will go towards creating a biorepository, a collection of DNA samples and other biological specimens.

Golden Bears hockey reorganizes

The Golden Bears hockey program has reorganized its structure so the majority of the off-ice business will be handled by a general manager.

"In order for us to maintain our position at the top of CIS hockey, we've got to have significant revenue streams. That's the missing piece for this program right now," said Ian Reade, director of Athletics and architect behind the new structure. "We believe this new model will make the Golden Bears extremely attractive and competitive on the recruiting front."

Stan Marple, who served as head coach of the Golden Bears in 2011-12, has been named the first general manager. Besides looking for a new head coach, Marple's duties will include revenue generation, with an eye toward arena improvements, as well as alumni affairs, marketing and promotion.

Preventing problems after cancer

Pediatrics researcher Lesley Mitchell will lead an Edmonton team of childhood cancer researchers that includes pediatric oncologist Maria Spavor and pediatric nephrologist Maury Pinsky as part of a national effort to prevent long-term complications from childhood cancer treatment.

The researchers will initially test blood samples of people who survived childhood cancer to see which genetic biomarkers made the survivors more susceptible to developing common post-cancer complications, such as blood clots, hearing loss, kidney failure or bone-marrow transplant rejection.

The Edmonton arm of the study has been tasked with zeroing in on blood clots. In five years, researchers will start a pilot study in which children deemed to be at risk of these complications will be given medications to prevent the noted health problems. Researchers hope this leads to the development of a screening tool that helps prevent complications.

"Thanks to advances in pediatric medicine and research, children are surviving cancer, but they are living with long-term complications of treatment for the disease," said Mitchell. "We want to help these children and prevent these complications from happening in the first place."

The \$4.3 million was funded in part by the Canadian Institutes of Health Research, the C17 Research Network and the Canadian Cancer Society.

Surgery podcasts get app treatment

The Surgery 101 podcast series, started by surgery professor Jonathan White, is now available as an app for tablets and smartphones.

The Surgery 101 app costs \$0.99 for the latest 10 episodes; \$4.99 gets buyers a one-year subscription. The app comes with notes from the podcast to make it easier for students to use as a study aid. All proceeds from sales of the app go to the Tom Williams Endowed Chair for Surgical Education.

The podcasts, which racked up more than 100,000 downloads in their first year, were meant as learning tools for U of A medical students, but they were soon downloaded by curious listeners from 100 countries worldwide. The series now receives an average of 1,000 to 2,000 downloads a day, and is approaching 500,000 downloads total. "It's popular because it's made by real surgeons who know what medical students need," said White.

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Sparkling a grassroots writing revolution

Michael Davies-Venn

A Killam Cornerstone Grant awarded to Christine Stewart, a professor of English and film studies, and Daniel Johnson, a PhD student, has helped the duo to share university resources with the community.

The grant allowed the pair to run a creative writing workshop called "Writing Revolution in Place" at Boyle Street Community Services, a community-based adult literacy centre in Edmonton. Stewart says they engaged in experimental creative expression with adult learners who have had little access to formal learning situations.

Class participants were part of the formal opening of the Edmonton Poetry Festival, one of the city's premier cultural events, on April 23. They hosted a reading in the foyer at City Hall called The Eutopia Project, to showcase their imaginations of Edmonton.

"The participants considered how they might write their city into a different place, how they might re-word the world they inhabit. Specifically, the reading at City Hall focused on the idea of Edmonton as a not as a Utopia, an impossible fantasy, but as a Eutopia, as a good and possible place," Stewart says. "Through poems, prose, manifestos and photographic montages, participants seek to redefine, re-describe, re-sign and re-inscribe their city and its spaces, and they do it in the very heart of their city."

Stewart says experimental creative writing forms are generally concerned with social change, challenging the status quo and articulating ways of life and modes of thinking that are often overlooked or disallowed by more normative practices.

The research team also considers whether "creative research and expression can enliven us to the world in inventive ways," she says. "Can methods of experimentation in creative writing help us locate new modes of expression, different forms



Christine Stewart created an outreach adult-literacy program to share university resources with the community.



of learning and thinking? What happens when we use particular creative forms to create pleasurable and politically aware relationships with language? How might formal and inquisitive language play give those who have been silenced the opportunity to speak?"

I wanted to be able to do an outreach program, so that we could share what we have here at the university, our resources and ideas, with the community."

Christine Stewart

The duo also worked with two students in English and film studies, Norman Mack and Jason Moccasin, and with Denis Lapierre, co-ordinator of the Learning Centre in Boyle Street Community Services.

Stewart says they wanted to know whether adult learners can develop linguistic skills that lend themselves to social activism if they are given the opportunity to learn innovative forms of inquiry and communication.

The class has also been a way to share the university's intellectual wealth with the community. "I wanted to be able to do an outreach program, so that we could

share what we have here at the university, our resources and ideas, with the community," Stewart says. "How might innovative writing classes work in a community of inner-city students, some of whom live in poverty and all of whom have difficulty accessing formal education?"

During the course of the two semesters, the class has discussed the works of writers such as William S. Burroughs, Simon Ortiz, Paulo Freire and Anthony Apakark Thrasher—all of whose works have critiqued systems of power and authority, Stewart says.

The group also visited the U of A's special collections to see William Blake's work, a copy of Treaty 6, and Edward Curtis' photographs. As well, Dwayne Donald, a professor in the Department of Secondary Education, led them on a river walk, giving the history of Edmonton's river valley from a Cree and Blackfoot perspective.

Stewart says the benefits of the class are mutual. "We all work together to open up our worlds to each other. We bring our skills from our work at the university, and the participants bring their rich array of skills, experiences and knowledge. The participants at the Learning Centre are brilliant, compassionate and funny. They have a real ability to sit and discuss things at length and in a way that you don't see much anymore."

classified ads

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Lack of conscientiousness may be a factor in driving students to drink

Jamie Hanlon

A new study by University of Alberta researcher Kelly Arbeau shows that students who put hitting the bottle before hitting the books may be putting themselves at risk.

Arbeau, along with fellow U of A researchers Don Kuiken and Cam Wild, found that students who used alcohol to cope and those who reported not completing daily tasks showed potential risk for alcohol-related problems.

However, the trend among students who completed daily tasks and used alcohol to enhance their mood seemed to be one of thinking—and drinking—responsibly.

"We really want to look at people's day-to-day experience and how it links with their traits and characteristics," said Arbeau. "We want to look at how the two work together to lead certain people into certain motivations for their drinking."

The research uncovered an interesting trend in student drinking as it relates to daily workloads and task completion. Arbeau says the research indicated two typical groups: the conscientious students who completed their work before drinking to have fun or to cope, and the less conscientious group who chose to drink, for whatever reason, despite not having completed their daily tasks. She says the more responsible group is likely making smarter planning choices and is less likely to experience the negative consequences of not meeting their responsibilities.

"This tells us that conscientiousness really is a key factor for people drinking; they look to, 'Have I finished my



Kelly Arbeau

business for the day? Have I done my homework? Have I gone to my job?' and so forth," she said. "It seems that they make sure their drinking is not going to interfere with those daily responsibilities. Maybe they are using the same conscientiousness about their drinking as they are in the rest of their lives."

As with other similar studies, the U of A researchers' results indicated that students adapt to two specific types of behaviour when consuming alcohol for mood-related reasons: as a means to deal with stress or with negative feelings, and as a means to enhance their positive mood. Students who did not typically drink to cope were seemingly less affected by day-to-day changes in mood. But those who drink to cope were more likely to do so on stressful days. Arbeau says that those using alcohol as a means of coping may lack other, less harmful methods of dealing with stress, and that identifying and working with these students may help them stave off potentially damaging drinking problems.

"Teaching alternatives to turning to alcohol to cope with distress—teaching people about anything from seeking out social support to having strategies for time management—could be an effective way of helping students who are drinking to cope."

Kelly Arbeau

"Research tells us that people who often drink to cope may lack other effective ways of coping," Arbeau said. "Teaching alternatives to turning to alcohol to cope with distress—teaching people about anything from seeking out social support to having strategies for time management—could be an effective way of helping students who are drinking to cope."

The study was published in the journal *Addictive Behaviors*. ■

The business of pharmacy

Bryan Alary

U of A is showing leadership by setting students up for success as the industry responds to increasing demands and an evolving business model.

"Having a better ability to navigate the complexities of pharmacy economics today is invaluable."

James Kehrer

"You get a very good clinical training program within pharmacy programs in Canada—the U of A is leading on a lot of that," said Shkrobot, a U of A alumnus. "The challenge is finding the balancing act on the operational side of things, which up until now you didn't get in Canada."

■

One student who can't wait to enrol is Ken Soong, president of the Alberta Pharmacy Students' Association.

Soong, who is completing his second year of pharmacy studies, wants to work in a regulatory or management role once he graduates in 2014. To accomplish his goals he'll need a well-rounded business skill set to manage a business, build relationships and inspire others, he said.

"People who come into pharmacy are always more clinically oriented, but now with this MBA program, we're seeing people with more organizational strengths starting to rise up," he said. ■

talks & events

Talks & Events listings do not accept submissions via fax, mail, email or phone. Please enter events you'd like to appear in folio and at www.news.ualberta.ca/events. A more comprehensive list of events is available online at www.events.ualberta.ca. Deadline: noon one week prior to publication. Entries will be edited for style and length.

APRIL 29

The Augustana Choir and selected alumni present West meets East. In eager anticipation for their international performance and study tour to Hungary, The Augustana Choir and selected alumni present "West meets East." Music of exemplary Canadian and Hungarian composers are featured. 7:30–9 p.m. Augustana Campus (Chapel), Camrose.

UNTIL JULY 14

China's Imperial Modern: The Painter's Craft. Do not miss this exciting new exhibition from the U of A Museums highlighting objects and artworks from the Mactaggart Art Collection. Through consideration of ink paintings, wood-block printed books, sketchbooks, and artist's tools such as inkstones and inks, The Painter's Craft asks how modern ways of making pictures—from mechanical copying to creative appropriation—emerged from the ink painter's studio and contributed to the crafting of everyday life in China during the imperial era. TELUS Centre.

UNTIL MAY 5

Wayfindings: Bachelor of Fine Arts Graduate Exhibition. This exhibition is the final visual presentation for the degree of Bachelor of Fine Arts. FAB Gallery.

MAY 1

2012 Physical Activity Forum: New Ways of Thinking to Get People Moving. This forum will focus on the concept of using positive health to rethink workplaces and play.

This forum offers a dynamic presentation by a renowned researcher and engaging speaker, Grant Schofield, professor of public health at Auckland

University of Technology, New Zealand who will focus on new ways to get adults moving in their workplaces and children moving in our neighbourhoods. For more information go to active.living@ualberta.ca or 780-227-6949. 8:30 a.m.–noon. Maple Leaf Room, Lister Conference Centre.

MAY 3–30

In Focus: Blind Photographers Challenge Visual Expectations. This exhibition features blind and partially sighted photographers exploring the built environment. Rutherford Library South Foyer.

MAY 3

Philosophy Colloquium. Brad Inwood, professor at the University of Toronto, will speak at the philosophy colloquium on What Can We Still Learn From Aristotelian Ethics? This lecture is part of the First Canadian Colloquium for Ancient Philosophy. 3:30–5 p.m., Assiniboia Hall 2-02A.

MAY 4

Copies and Multiples: The Imperial Arts of China. Join Lisa Claypool, curator of the Mactaggart Art Collection and the U of A Museums exhibition China's Imperial Modern: The Painter's Craft, as she discusses aspects of artistic production in late imperial China. No pre-registration is required, but space is limited. Please arrive by noon. 12:15–12:45 p.m. TELUS Centre.

MAY 9

Student Assessment: Are we meeting the grade? What is the U of A's policy on student assessment? How has this been recently changed or refined in light of the task force on assessment? How do my experiences and practices with

student assessment dovetail or conflict with current research? To consider these and many other questions, come hear Bob Luth, associate chair in the Department of Earth and Atmospheric Science and lead author of the recent report on Assessment and Grading Policy, in conversation with panelists from across campus. 4–5:20 p.m. CCIS 1-140.

MAY 10–12

Media and Media Practices in Minority and Competitive Contexts: From Local to Global. For complete conference information, visit <http://confmedia.jimdo.com>. Convocation Hall.

laurels

A Southwestern Finance Association award for Best Paper in Financial Institutions was accepted by Campus Saint-Jean professor Sadok El Ghoul for an article he co-authored entitled "Collectivism and Corruption in Bank Lending."

"What we're advancing is essentially that a 'well-oiled' banking system is paramount to the economic growth of a country," said El Ghoul, who wrote the article in collaboration with researchers in South Carolina. "We've noticed that the more collectivist the culture, the more corrupt banking systems become." As an example, the professor mentions that North American countries are among those

where individualism prevails, as opposed to South American countries like Venezuela.

Sushanta Mitra, professor in the Department of Mechanical Engineering, has been elected to the rank of fellow of the Canadian Society of Mechanical Engineering.

Kerry Courneya, professor in the Faculty of Physical Education and Recreation has been named the recipient of the 2012 Canadian Association of Psychosocial Oncology Award of Research Excellence in recognition of his contributions to the field of exercise and cancer.

Chemical engineering professor **Zhenghe Xu**, whose research

focuses on making energy production greener and more efficient has received the Frank Spragins Technical Award for integrity, expertise and outstanding achievement from the Association of Professional Engineers and Geoscientists of Alberta.

Xu holds the Canada Research Chair in Mineral Processing and the Natural Sciences and Engineering Research Council of Canada's Industrial Research Chair in Oil Sands Engineering. Today, Xu operates research programs with more than \$1.6 million in annual funding, supervises 35 graduate students and six post-doctoral fellows and teaches senior and graduate student-level courses.

TRINKETS, KNICK-KNACKS & SOUVENIRS

Greetings From...Exchanging Cultural Ideas Through Tourism celebrates and explores the trinkets we may pay too much for and jam into overstuffed suitcases to haul hundreds of miles, so they can sit on a shelf or wall, or be given away. The exhibit is open until May 21 in the lobby of the Human Ecology Building.

